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ON THE MEIOTIC CHROMOSOMES OF *ARGINA* SYRINGA CRAM

(ARCTIIDAE)

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ABSTRACT

The haploid chromosome number of *Argina syringa* was determined as 31 which forms the first report in this genus from India. The mean of the terminalization coefficient and chiasma frequency are .930 and .912 respectively.

Chromosomes of some Indian members of the family Arctiidae, to which *Argina syringa* Cram here under study belongs, were reported by Gupta (1964), Rishi (1973) and Das and Nayak (1975). None of the three Indian representatives of the genus *Argina* (Hampson 1894) is known cytologically till to date and hence this note aims at recording the chromosome number and details of meiosis of *A. syringa* which forms the first report of chromosome number in the genus *Argina* from India.

All the material used for the present study was collected from the fields around A.U. Postgraduate Centre, Nallapadu, Guntur. Testes of adults as well as larvae were squashed in 2% acetic-orcein without prefixation. The preparations were made permanent following the quick freeze method.

Counts on well spread metaphase I plates show clearly 31 bivalents (Fig. I), most of which are dumb-bell shaped with terminalized chiasma. Cross bivalents with single interstitial chiasma and ring bivalents with two terminal chiasma could also be seen in some bivalents.

Though the inherent difficulties with lepidopteran chromosomes like the large number, small size and almost isodiametric shape thwart detailed observations on their morphology, an attempt was made to study their meiotic features. Out of 7037 bivalents in 227 nuclei studied in 12 specimens, 430 were cross

bivalents, 95 were ring bivalents, 5726 were dumb-bell shaped with terminal chiasma and 786 separated early into distinct univalents. The terminalization coefficient ranges from .867 to .960 with a mean of .930 and the chiasma frequency ranges from .813 to 1.089 with a mean of .912.

Comparison of chromosome number at different taxonomic levels in Lepidoptera reveals certain interesting affinities. Ray Robinson's review (1971) on this subject shows that 31 is the modal haploid number of the family Arctiidae and also that of the order Lepidoptera. The haploid number of *Argina syringa* Cram agrees with the modal number of the family and the order.

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Fig. I—Metaphase I stage of *Argina syringa* Cram.